

PONDERIA GEN. NOV. with discussion of related genera, and description of  
*Ponderia abies* SP. NOV. (GASTROPODA : MURICIDAE : MURICINAE).

Roland HOUART

St. Jobsstraat, 8, B-3330 Landen (Ezemaal) Belgium.  
Scientific collaborator at the Institut Royal des  
Sciences Naturelles de Belgique.

Keywords : Gastropoda : Muricidae : Taxonomy.

ABSTRACT:

*Ponderia* gen. nov. is here named with *Typhis zealandicus* Hutton as type species. Also included are two other species : *Murex canaliferus* Sowerby and *Ponderia abies* sp. nov. *Pterynotus iredalei* Fleming is synonymized with *Murex canaliferus* Sowerby and separated from *Murex cancellatus* Sowerby.

RESUME:

Un nouveau genre, *Ponderia*, est nommé; *Typhis zealandicus* est désigné comme espèce type. Deux autres espèces y sont incluses: *Murex canaliferus* Sowerby et *Ponderia abies* sp. nov. *Pterynotus iredalei* Fleming est mis en synonymie avec *Murex canaliferus* Sowerby et séparé de *Murex cancellatus* Sowerby.

INTRODUCTION.

Dr. Ponder (Australian Museum) recently sent to me an unidentified muricid which proved to belong to an undescribed species. A new genus is proposed for this new species and two others which are all endemic to the West Pacific (approximately between 30° and 40° S; 150° and 180° E). The genus is similar to *Prototyphis* Ponder, 1972 and two other genera, recently transferred from the Typhinae to the Muricinae by D'Attilio (1982 : 94): *Pterotyphis* Jousseume, 1880 and *Tripterotyphis* Pilsbry and Lowe, 1932 (= *Nototyphis* Fleming, 1962). The genus *Poropteron* Jousseume, 1880, although belonging to the subfamily Ocenebrinae is also compared; *Poropteron* has a similar shell to the new genus, but this is due to convergence rather than true relationship, the species belonging to the Ocenebrinae having a purpuroid operculum and a different radula.

GENUS : *Ponderia* gen. nov.

TYPE - SPECIES : *Typhis zealandicus* Hutton, 1874.

ETYMOLOGY : named for Dr. Winston F. Ponder without whom this work would not have been possible.

DIAGNOSE.

Shell small, up to 35 mm in length; bearing three winged varices, each with a medium to long carinal spine. Siphonal canal and carinal spines closed, forming hollow tubes. Spiral and axial sculpture smooth. Aperture rounded slightly erect, forming an entire peristome, smooth inside.

COMPARISON TABLE WITH RELATED GENERA.

Carinal spine.....	1- <i>Ponderia</i> . . . .	Medium to long. Closed, <u>joined on its lower side</u> , forming a hollow tube. Carinal spines of preceding whorls closed and rounded.
	....2- <i>Poropteron</i> . . .	Medium, closed, joined on its middle.
	....3- <i>Prototyphis</i> . . .	Short, strongly upward recurved, grooved by a narrow, open channel.
	....4- <i>Tripterotyphis</i> .	Strongly upward recurved, <u>sealed on its midline</u> , generally wider than for <i>Ponderia</i> .
	....5- <i>Pterotyphis</i> . . .	No carinal spine.
Aperture	....1 - 2 - 3 - 5. . . .	Rounded to ovate, smooth.
	....4. . . . .	Ovate, outer lip weakly undulate.
Operculum	....1 - 3. . . . .	Muricine, apical nucleus.
	....2. . . . .	Ocinebrine, lateral nucleus.
	....4 - 5. . . . .	Unknown.
Siphonal canal....	1 - 2 - 4. . . . .	Closed, joined on its midline, forming a hollow tube.
	....3. . . . .	Open.
	....5. . . . .	Partially closed.
Intritalcalx	....1 - 2 - 3. . . . .	Absent.
	....4 - 5. . . . .	Elaborate intritalcalx.
Radula	....1 - 3. . . . .	Muricine.
	....4. . . . .	Muricopsine.
	....2. . . . .	Ocinebrine.
	....5. . . . .	Unknown.
Tubes	....1 - 4. . . . .	Within the varices.
	....5. . . . .	Between the varices.
	....2 - 3. . . . .	Absent.
Size	....1 - 2. . . . .	Up to 35 mm.
	....3. . . . .	Up to 25 mm.
	....4 - 5. . . . .	Generally not exceeding 20 mm.

From this table, *Tripterotyphis*, although near *Ponderia*, can be maintained as a separate genus. The shells of species of *Tripterotyphis* are much stouter and relatively smaller; the suture of spines is different and the radula, illustrated by Radwin and D'Attilio (1976 : 203) has a muricopsine outline. Moreover, the shells of all the species belonging to *Tripterotyphis* show an elaborate intritalcalx while the *Ponderia* have none.

The genus *Pterotyphis*, to which *Murex canaliferus* Sowerby is assigned by Chernohorsky (1978 : 72), is closer to *Tripterotyphis* than to *Ponderia* and its shell characters do not agree with the three species included in the new genus: it has strong spiral sculpture, a wider siphonal canal with large flaring wing, an elaborate intritalcalx and has the tubes between the varices, no within.

Other similar genera are *Pterynotus* Swainson, 1833 and *Pterochelus* Jousseaume, 1880. Species in this genus have much larger shells, up to 100 mm in length and show

open carinal spines and siphonal canal. Species of *Purpurellus* Jousseaume, 1880 have larger shells, up to 70 mm in length, close carinal spines and siphonal canal, but these are closed in a different way, the upper side of the shoulder spines overlapping the right margin.

Differences in the construction of the spines and the siphonal canal, in the position of the hollow tubes, added to the other minor differences (see table) justify the erection of this new genus.

#### DISCUSSION.

Three species are included: *Typhis zealandica* Hutton, 1873; *Murex canaliferus* Sowerby, 1841 (= *Murex iredalei* Fleming, 1962); and *Ponderia abies* sp. nov.

*Typhis zealandica* (type-species) was described as a fossil from the Pleistocene of New Zealand. However, a living specimen has been dredged from Cook Strait, New Zealand (Dell and Fleming, 1962).

Gertman (1969 : 186) was the first to notice the relationship between *Murex canaliferus* and *Pterynotus iredalei*, suggesting they could be the same species. The illustration of Sowerby (1841 : fig. 74) is good and it is sufficient to state that *Murex canaliferus*, although named from an unknown locality and probably described from a dead specimen with its siphonal canal showing an open channel, is the shell later named by Fleming.

*Murex canaliferus* is here considered as a valid species and not as a subspecies of *Typhis zealandica* as has been done by most recent authors, under the name *Pterynotus iredalei* Fleming, 1962.

*Murex cancellatus* Sowerby, 1841 (not *Murex cancellatus* Gmelin, 1791) is not a form of *M. canaliferus* as stated by Sowerby (1879 : 26) and by most recent authors (except Gertman, 1969 and Cernohorsky, 1978) and is a *Tripterothyphis*, probably the species named later as *Typhis triangularis* A. Adams, 1856. A specimen in the Dautzenberg collection (I.R.S.N.B., Brussels), purchased from Sowerby and Fulton, is here illustrated. It is labelled "*Murex canaliferus* Sowerby", but clearly is what Sowerby named *Murex cancellatus*. Fair (1976 : 29, text fig. 13) illustrated *Murex cancellatus* as *M. canaliferus*; Radwin and D'Attilio (1976 : 95) synonymized *T. zealandica* and *P. iredalei* with *Typhis angasi*, a totally different species belonging to *Prototyphis* Ponder, 1972.

*PONDERIA ABIES* sp. nov. . . . . figs. 3 - 3a.

#### DESCRIPTION.

Shell medium sized for the genus, fragile. Aperture roundly ovate with entire peristome; columellar lip completely detached from the shell, smooth. No apparent anal notch. Outer lip smooth and erect, inner side smooth.

Spire moderately low with a protoconch of unknown nature (broken) and 5 rounded nuclear whorls. Suture impressed. Body whorl bearing 3 fine varices ornamented with long, flat, closed and hollow carinal spines of the same size than the siphonal canal, followed by a varical flange consisting of 3 spinelets: the first one recurved upwards, the second one straight and the third one recurved downwards. Spire whorls ornamented with long carinal, closed and hollow spines. No axial nor spiral sculpture apparent.

Siphonal canal long and hollow, sealed from the aperture to the 2/3 of its length, recurved backwards on its tip and bearing a small sharp spine on its base. Mottled with white and light brown, small spinelets and siphonal canal mostly glossy white. Radula and operculum unknown.

TYPE MATERIAL.

Holotype, C144982, Australian Museum, Sydney.  
 Size of shell: 20 x 19.5 mm (spines included).  
 Aperture: 3.5 x 2.2 mm ; longest carinal spine: 9.5 mm ; siphonal canal: 9.2 mm.

TYPE LOCALITY.

Off Newcastle, N.S.W., 7 Oct. 1982, 33°06.2'S, 156°09.3'E, 154-164 m.  
 R.V. "Tangaroa", stn U212.

ETYMOLOGY.

Named *abies* for its outline, which resembles a fir-tree.

DISCUSSION.

The new species may be compared with the two others species included in the new genus. It differs from *P. zealandica* in being more slender and having a narrower aperture. Moreover, *P. abies* is smooth while *P. zealandica* has a shallow spiral sculpture. Its siphonal canal is long, bearing one small spinelet, while the canal of *P. zealandica* shows a flaring wing, extending from the shoulder spine almost to the extremity of the siphonal canal.

*P. canaliferus* differs in having shorter and more upward recurved shoulder spines, a shallow spiral sculpture and a shorter siphonal canal with three short spines. It has also a comparatively larger aperture.

Judging from the illustration of *Murex tenuicornis* Tate, 1888 (Ludbrook, 1973: pl. 25, fig. 43), the reader could observe a striking resemblance with *P. abies*, however, *M. tenuicornis* has more angulate whorls with a well-marked carina on the last whorl. The body whorl is ornamented with a long open carinal spine (closed and forming a hollow tube for the new species), followed by 5 small spinelets. The carinal spine is more rounded and finer and the body whorl bears 2 to 3 spiral threads. The aperture is more angulate and the siphonal canal is narrowly open. The correct genus for *Murex tenuicornis* is probably *Pterochelus* Jousseaume, 1880.

ACKNOWLEDGEMENTS.

My special thanks to Dr. W.F.Ponder (Australian Museum), who provided me with most of the material used in this paper and to Dr. E.H. Vokes (Tulane University) for her welcome comments, and to both for reading the manuscript and for their useful notes. I am also most grateful to Dr. N. Pledge (South Australian Museum) for the loan of the type of *Murex tenuicornis* Tate, 1888 and to Dr. J. Van Goethem (Institut Royal des Sciences Naturelles de Belgique) for the loan of "*Typhis cancellatus*".

BIBLIOGRAPHY.

Cernohorsky, W.O., 1979. Tropical Marine Shells: 1-352, pls. 1-68, 17 text figs.  
 Sydney.

- D'Attilio, A., 1982. Convergence in the Typhine form. *The Festivus* XIV (8): 94-98, 14 text figs.
- Dell, R.K. and C.A. Fleming, 1964. An example of *Pterynotus zealandicus* (Hutton) living in Cook Strait. *Rec. Dominion Mus.* 5 (1): 1-2.
- Fair, R.H., 1976. The *Murex* book, an illustrated catalogue of recent Muricidae (Muricinae, Muricopsinae, Ocenebrinae), Honolulu: 1-138, pls. 1-23, 56 text figs.
- Fleming, C.A., 1962. The genus *Pterynotus* Swainson (Gastropoda, Family Muricidae) in New Zealand and Norfolk Island. *Trans. Royal Soc. New Zealand*, 2 (14): 109 - 119, 1 pl.
- Gertman, R.L., 1969. Cenozoic Typhinae (Mollusca: Gastropoda) of the Western Atlantic Region. *Tulane Studies in Geol. and Paleont.* 7 (4): 143-191, pls. 1-8.
- Ludbrook, N.H., 1973. Distribution and stratigraphic Utility of Cenozoic Molluscan Fauna in Southern Australia. *Tohoku Univ., Sci. Rep.*, Special vol. (6): 241-261, pls. 24-28, 1 fig., 1 table.
- Ponder, W.F., 1972. Note on some Australian genera and species of the family Muricidae (Neogastropoda). *Jour. Malac. Soc. Aust.* 2 (3): 215-248, pls. 21-23, 4 text figs.
- Powell, A.W.B., 1979. *New Zealand Mollusca: I-XIV*, 1-500, pls. 1-82, figs. 1-120, Hong Kong.
- Radwin, G.E. and D'Attilio, 1976. *Murex* shells of the World, an illustrated guide to the Muricidae. Univ. Press, Standford, Calif.: 1-284, pls. 1-32, 192 text figs.
- Sowerby, G.B., 1834-1841. The Conchological Illustrations, *Murex*, London, pls. 58-67, 1834; pls. 187-199 & catalogue: 1-9, 1841.  
1879. Thesaurus Conchyliorum. Monograph of the genus *Murex*, Sowerby, F.L.S., London, 4, pts. 33-34: 1-55, pls. 380-403.
- Tate, R., 1888. The Gastropods of the Older Tertiary of Australia (Part 1). *Trans. & Proc. and Rep. of the Royal Soc. S. Australia*, vol. 10: 91-176; pls. 1-13.
- Vokes, E.H., 1964. Supraspecific groups in the subfamilies Muricinae and Tritonaliinae (Gastropoda: Muricidae). *Malacologia* 2 (1): 1-41, 3 pls.  
1971. Catalogue of the genus *Murex* Linné (Mollusca: Gastropoda), Muricinae, Ocenebrinae. *Bull. Am. Paleont.*, 61 (268): 1-141.

